WHAT IS CLAIMED IS:

1. An apparatus for providing adaptive equalization of a receiver channel of a satellite terminal of a satellite communication system, said apparatus comprising:

a digital filter comprising a first register for receiving input data signals and a second register for receiving a set of filter coefficients, said digital filter operative for multiplying said input data signals contained in said first register by said set of coefficients contained in said second register, said digital filter generating a set of output signals on the basis of the result of the multiplication between said input data signals and said set of filter coefficients;

an equalizer coupled to said digital filter so as to receive said set of output signals generated by said digital filter as input signal, said equalizer operative for adapting said set of filter coefficients so as to generate an updated set of filter coefficients, said updated set of filter coefficients functioning to modify the performance of said filter to compensate for phase and amplitude variations in said input data signals; and

a tap-shifting circuit coupled to said equalizer so as to receive said updated set of filter coefficients, said tap-shifting circuit operative for analyzing said updated set of filter coefficients so as to identify the most significant coefficients, and for shifting the location of the coefficients such that said most significant coefficients are located substantially in the center of said second register when said updated set of filter coefficients are placed in said second register.

2. The apparatus of claim 1, wherein said digital filter is a FIR filter.

3. The apparatus of claim 1, wherein said equalizer is a LMS equalizer.

4. The apparatus of claim 1, wherein said input data signals have a bandwidth of 500MHz.

5. The apparatus of claim 1, wherein said satellite communication system transmits said input data signals to said satellite terminal in a burst mode in which data

is transmitted to said satellite terminal in distinct segments of time, each of which represents a single burst.

6. The apparatus of claim 5, further comprising a validation circuit operative for determining if said input data signals associated with a given burst were intended for said satellite terminal prior to allowing said updated set of coefficients to be placed in said second register.

7. The apparatus of claim 6, wherein said validation circuit compares a microcell address contained in said burst with a microcell address of the satellite terminal.

8. A method for providing adaptive equalization of a receiver channel of a satellite terminal of a satellite communication system, said method comprising the steps of:

filtering input data signals utilizing a set of filter coefficients so as to generate a set of output signals, said filter coefficients be located in a coefficient register;

coupling said set of output signals to an equalizer, said equalizer operative for adapting said set of filter coefficients so as to generate an updated set of filter coefficients, said updated set of filter coefficients functioning to modify the performance of said filter to compensate for phase and amplitude variations in said input data signals; and

analyzing said updated set of filter coefficients so as to identify the most significant coefficients, and for shifting the location of the filter coefficients such that said most significant coefficients are located substantially in the center of said coefficient register when said updated set of filter coefficients are placed in said coefficient register.

9. The method of claim 8, wherein said filtering of said input data signals implements a FIR filter operation.

10. The method of claim 8, wherein said equalizer is a LMS equalizer.

11. The method of claim 8, wherein said input data signals have a bandwidth of 500MHz.

12. The method of claim 8, wherein said satellite communication system transmits said input data signals to said satellite terminal in a burst mode in which data is transmitted to said satellite terminal in distinct segments of time, each of which represents a single burst.

13. The method of claim 12, further comprising a data validation step for determining if said input data signals associated with a given burst were intended for said satellite terminal prior to allowing said updated set of filter coefficients to be placed in said coefficient register.

14. The method of claim 13, wherein said data validation step comprises comparing a microcell address contained in said burst with a microcell address of the satellite terminal.

15. An apparatus for providing adaptive equalization of a receiver channel of a satellite terminal of a satellite communication system, said method comprising the steps of:

means for filtering input data signals utilizing a set of filter coefficients so as to generate a set of output signals, said filter coefficients be located in a coefficient register;

means for coupling said set of output signals to an equalizer, said equalizer operative for adapting said set of filter coefficients so as to generate an updated set of filter coefficients, said updated set of filter coefficients functioning to modify the performance of said filter to compensate for phase and amplitude variations in said input data signals; and

means for analyzing said updated set of filter coefficients so as to identify the most significant coefficients, and for shifting the location of the filter coefficients such that said most significant coefficients are located substantially in the center of said

coefficient register when said updated set of filter coefficients are placed in said coefficient register.